SQL Course

*****All contents will be applicable to PostgreSQL, MySQL, Microsoft SQL Server and Oracle.*

Course Contents:

▼ **Introduction to SQL:**

- What is data and database

- Difference between database and RDBMS

- How data is stored in relational database

▼ **SQL Commands:**

- DDL commands

  - CREATE, ALTER, DROP, TRUNCATE

  - Data Types like VARCHAR, INT, DATE, FLOAT, BOOLEAN

  - Constraints like PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK and NOT NULL

- DML commands

  - INSERT, UPDATE, DELETE, MERGE

- TCL commands

  - COMMIT, ROLLBACK and SAVEPOINT

- DCL commands

  - GRANT and REVOKE

- DQL commands

  - SELECT statement

▼ **Basic SQL concepts & Query writing**

- Different operators:

- - Comparison operators

    - Arithmetic operators

    - Logical operators

    - UNION and UNION ALL operators

  - CASE statement

  - Important SQL clauses:

    - DISTINCT

    - LIMIT (TOP)

    - ORDER BY

  - INNER JOIN

▼ **Intermediate SQL concepts & Query writing**

  - Subqueries

  - WITH clause

  - Group by and Having clause

  - Aggregate functions

  - JOINS

    - LEFT, RIGHT, FULL OUTER JOIN, CROSS JOIN.

  - Inbuilt functions

    - Date functions like TO_DATE, DATE_FORMAT, CAST, DATE_ADD etc.

    - String functions like TO_CHAR, FORMAT, SUBSTRING, POSITION, CONVERT etc.

▼ **Advance SQL concepts & query writing**

  - SELF JOIN queries

  - Window functions

  - Recursive SQL Queries

  - Pivot table

- Stored Procedure

- User defined Functions

▼ **SQL project**

- Download realistic dataset from the internet

- Upload the dataset to RDBMS

- Cleanse and analyse the data

- Write multiple SQL queries to derive useful information from the dataset.